

### **REMARKS**

This Amendment is responsive to the communication of April 22, 2004. Reconsideration of **claims 1-42** is respectfully requested.

#### **The Office Action**

**Claims 1-12, 15-16, 26-31 and 33-34** stand rejected under 35 U.S.C. §102(b) as being anticipated by Schoniger, et al. (U.S. Patent 5,136,483).

**Claims 17-25** stand rejected under 35 U.S.C. §102(e) as being anticipated by Sayers (U.S. Patent 6,527,411).

**Claims 35-42** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Schoniger, et al. (U.S. Patent 5,136,483).

**Claims 13-14, and 32** were objected to as being dependent on the rejected base claims. Claims 13-14 and 32 were indicated to include an allowable subject matter.

#### **Correction to the Information Disclosure Statement**

##### **Submitted June 8, 2004**

In conjunction with the Information Disclosure Statement submitted to the USPTO on June 8, 2004, Applicants are attaching a printed copy of U.S. Published Application No. 2002/0118548, which was not previously submitted.

#### **Claims 13 and 14 are Allowable**

It was indicated in the Office Action that **claim 13** would be allowable if rewritten in an independent form. Claim 13 was rewritten in an independent form to include all limitations of independent claim 1. It is therefore respectfully submitted that **claim 13** and dependent **claim 14** are allowable.

#### **Claims 1-12 and 15-16 Distinguish Over References**

**Claim 1** calls for among other limitations: heat sinking via the support substrate. Initially, Applicants respectfully traverse Examiner's interpretation of Schoniger. Schoniger discloses a light emitting device **14** disposed on the edge **13** of the illuminating element **10**. (Column 3, lines 33-35.) In one embodiment, the rear side **17** of the illuminating element is made conically convex. (Column 3, lines 55-56.) To ensure dissipation of heat, the rear side **17** is provided with annular cooling bodies **19**. (Column 4, lines 3-5.) Schoniger does not disclose heat dissipation via the support

substrate. Schoniger discloses heat dissipation via cooling bodies attached to the curved reflective surface. It is therefore respectfully submitted that **claim 1** and dependent **claims 2-12** and **15-16** distinguish patentably over Schoniger.

Regarding **claim 5**, in addition to its relationship to claim 1, claim 5 calls for among other limitations: a first edge of the light emitting device to be positioned substantially aligned with an optical focus of the parabolic surface, the light emitting device extending from the first edge away from the light aperture. It is alleged in the Office Action that Schoniger discloses such positioning of the light emitting device. Applicants respectfully traverse Examiner's interpretation of Schoniger. Nowhere does Schoniger disclose or suggest positioning the light emitting device such that a first edge is aligned with an optical focus of the parabolic surface such that the light emitting device extends from the first edge away from the light aperture as claimed in claim 5. It is therefore respectfully submitted that **claim 5** distinguishes patentably over Schoniger.

Regarding **claim 10**, in addition to its relationship to claim 1, claim 10 calls for among other limitations: the light transmissive surface which is arranged at a non-zero angle with respect to an optical axis of the parabolic reflector. It is alleged in the Office Action that surface **16** of Figure 3 of Schoniger is arranged at a non-zero angle with respect to an optical axis of the parabolic reflector. The Applicants respectfully traverse such interpretation of Schoniger. Schoniger discloses surface **16** to be positioned at exactly zero angle with respect to an optical axis of the parabolic reflector. It is therefore respectfully submitted that **claim 10** distinguishes patentably over Schoniger.

Regarding **claim 12**, in addition to its relationship to claim 1, claim 12 calls for among other limitations: the light emitting device and the curved reflector define a light emission module, the light source including a plurality of light emitting modules arranged on the support substrate. It is alleged in the Office Action that Schoniger discloses a plurality of light emitting modules arranged on the support substrate. Schoniger depicts a plurality of light emitting diodes **14** which are disposed at the periphery of a lamp. (Fig. 1.) While the rear side **11** of the illuminating element is flat, the front side **12** is configured in a convex. (Column 3, line 30-32.) Nowhere does Schoniger disclose or suggest a plurality of light emitting modules arranged on a

substrate, each module including an individual light emitting device and an associated reflector. At best, Schoniger discloses a plurality of light emitting devices which all share the same reflector. It is therefore respectfully submitted that **claim 12** distinguishes patentably over Schoniger.

### **Claims 17-25 Distinguish Over References**

**Claim 17** calls for among other limitations: the light output openings of the reflective cups non-parallel to the planar portion. Sayers discloses light units disposed on a planar surface such that their openings are parallel to the planar surface. It is therefore respectfully submitted that **claim 17 and dependent claims 18-25** distinguish patentably over Sayers.

Regarding **claim 21**, in addition to its relationship to claim 17, claim 21 calls for among other limitations: light emission module that has an edge aligned with a focus of the parabolic portion of the reflective cup and which extends laterally away from the light output opening. It is alleged in the Office Action that Sayers discloses a light emission module that has an edge aligned with the focus of the parabolic portion of the reflective cup. (Column 4, lines 20-27.) Sayers does not disclose such a device. Sayers discloses the LED **18** which is positioned at the focal point **42** of the parabolic surface **15**. Nowhere does Sayers disclose or suggest to align the first edge of the light emission module with the focus of the parabolic portion of the reflector such that it extends laterally away from the light output opening. It is therefore respectfully submitted that **claim 21** distinguishes patentably over Sayers.

Regarding **claim 23**, in addition to its relationship to claim 17, claim 23 calls for among other limitations: the light-transmissive surface being tilted downward from the orthogonal for the low beam light emission modules. It is alleged in the Office Action that Sayers depicts such a structure in Figure 1. Sayers discloses a plurality of light modules disposed on a flat surface. (Fig. 1.) Light output of the light modules is covered with a curved surface **36**. As seen in Fig. 1, surface **36** is a substantially rounded surface. Nowhere does Sayers disclose or suggest a light-transmissive surface that is tilted downward from orthogonal. It is therefore respectfully submitted that **claim 23** distinguishes patentably over Sayers.

### **Claims 26-34 Distinguish Over References**

**Claim 26** calls for among other limitations: an opening defined by edges of the generally planar side and the generally curved side. Initially, Applicants respectfully traverse Examiner's interpretation of Schoniger. Schoniger discloses a structure having two planar sides **16** and a curved side **17**. Two planar sides **16** define an opening through which the light passes. (Fig. 3.) Applicants direct Examiner's attention to Figure 1 of present application, in which the aperture is defined by a planar surface **14** and a curved surface **16**. Nowhere does Schoniger disclose or suggest that a light aperture is defined by the edges of a planar side and a curved side as claimed in claim 26. It is therefore respectfully submitted that **claim 26** and dependent **claims 27-34** distinguish patentably over Schoniger.

Regarding **claim 29**, in addition to its relationship to claim 26, claim 29 calls for among other limitations: a light-transmissive surface that is arranged at a non-perpendicular angle to the planar side to refractively tilt the light. It is alleged in the Office Action that Schoniger discloses the light-transmissive surface that is arranged at a non-perpendicular angle to the generally planar side. Nowhere does Schoniger disclose or suggest such a structure. It is therefore respectfully requested that this ground of rejection of claim 29 be withdrawn. If Examiner maintains this ground of rejection of **claim 29**, Applicants respectfully request that Examiner directs the Applicants to where exactly Schoniger discloses such limitation.

### **Claims 35-42 Distinguish Over References**

**Claim 35** calls for among other limitations: heat sinking the light emitting semiconductor via the planar surface. Initially, Applicants submit that since Schoniger does not disclose the method of making a lighting device, this reference is not an applicable prior art. Applicants respectfully request this reference be withdrawn. In addition, Schoniger discloses heat dissipation through the rear side **17** which is provided with annular cooling bodies **19**. (Column 4, lines 3-5.) Schoniger does not disclose or suggest heat dissipation via the support substrate. It is therefore respectfully submitted that **claim 35** and dependent **claims 36-42** distinguish patentably and unobviously over Schoniger.

**CONCLUSION**

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (**Claims 1-42**) are now in condition for allowance.

Respectfully submitted,

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7/21/04

Date



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